

**WHAT IS CLAIMED IS:**

1. A UWB receiver comprising:  
at least one communication module with a limited working band whose on/off state can be controlled;  
wherein the UWB receiver is adapted to detect power intensity of a received radio signal in the limited working band based on an on/off state of said at least one communication module, and  
wherein the UWB receiver is adapted to control the on/off state of the at least one communication module based on a result of the detection.
2. The UWB receiver of claim 1, wherein the detected power intensity corresponds to a band that comprises a frequency at which interference is expected.
3. The UWB receiver of claim 1, further comprising:  
a baseband controller adapted to control the on/off states of said at least one communication module, to detect the power intensity of the radio receive signals, and to control the on/off state of said at least one communication module.
4. The UWB receiver of claim 3, further comprising an MAC for storing information on the detected band and transmitting the stored information on the band to other UWB receivers.
5. The UWB receiver of claim 4, wherein the information on the band is transmitted through a management frame.
6. The UWB receiver of claim 4, wherein the information on the band is stored in a physical layer header.

7. The UWB receiver of claim 1, wherein the at least one communication module comprises a band stop filter.

8. The UWB receiver of claim 1, wherein the at least one communication module comprises a small signal amplifier.

9. A UWB transmitter, comprising:  
at least one communication module with limited working bands whose on/off states can be controlled,  
wherein the UWB transmitter controls the on/off states of the at least one communication module to filter out a radio transmission signal in a corresponding band.

10. The UWB receiver of claim 9, wherein the band comprises a frequency at which interference is expected.

11. The UWB transmitter of claim 9, further comprising:  
a baseband controller for controlling the on/off state of the at least one communication module and to control transmission of the radio transmission signal in the band.

12. The UWB transmitter of claim 11, wherein the baseband controller comprises a power control unit for controlling intensity of transmission power of the radio transmission signal based on a specific frequency band.

13. The UWB transmitter of claim 9, wherein the at least one communication module comprises a band stop filter.

14. The UWB transmitter of claim 9, wherein the at least one communication module comprises a small signal amplifier.

15. A UWB transceiver, comprising:  
at least one communication module;  
wherein the UWB transceiver is adapted to detect power intensity of a radio receive signal by bands according to on/off states of the at least one communication module with a predetermined limited working bands, and,  
further adapted to control the on/off states of the at least one communication module based on the detection result, to filter out a radio receive/transmission signal in a corresponding band.

16. The UWB transceiver of claim 15 wherein the band comprises a frequency at which interference is expected.

17. The UWB transceiver of claim 15, comprising:  
a baseband controller adapted to control the on/off states of the at least one communication module, and  
further adapted to detect the power intensity of the radio receive signal in accordance with the control, and to control the on/off state of the at least one communication module according to the detection result.

18. The UWB transceiver of claim 17, wherein the baseband controller comprises a power control unit for controlling intensity of transmission power of the radio transmission signal according to a signal to noise ratio (SNR) of the radio receive signal.

19. The UWB transceiver of claim 17, further comprising an MAC for storing information on the band and transmitting the stored information on the band to other UWB receivers.

20. The UWB transceiver of claim 19, wherein the information on the band is transmitted through a management frame.

21. The UWB transceiver of claim 19, wherein the information on the band is stored in a physical layer header.

22. The UWB transceiver of claim 15, wherein the at least one communication module comprises a band stop filter.

23. The UWB transceiver of claim 15, wherein the at least one communication module comprises a small signal amplifier.

24. A method of receiving UWB signals, comprising:  
detecting power intensity of a radio receive signal according to on/off states of at least one communication module with a limited working band;  
controlling the on/off states of the at least one communication in accordance with the detection result; and  
filtering out the radio receive signal in the band.

25. The method of claim 24, wherein the band comprises a frequency at which interference is expected.

26. The method of claim 24, wherein the step of controlling the on/off states of the at least one communication module includes setting the on or off state according to the detection result of the power intensity.

27. A method of transmitting UWB signals, comprising:  
controlling on/off state of at least one communication module; and  
filtering out a radio transmission signal in a band.

28. The method of claim 27, wherein the step of controlling the on/off state of at least one communication module further includes:  
setting on/off state of the communication module and

making an agreement on the determination result with at least one other communicating UWB receiver.

29. The method of claim 28, wherein the step of making an agreement on the determination result includes:

storing information on the determination result; and  
transmitting the stored information to the other UWB receiver.

30. A method of transceiving UWB signals, comprising:

detecting power intensity of a radio receive signal according to on/off states of at least one communication module with a limited working band;

controlling the on/off states of the at least one communication module in accordance with the detection result; and

filtering out a radio receive/transmission signal in a band.

31. The method of claim 30, wherein the step of controlling the on/off states of the plurality of communication modules includes:

setting on/off state of the at least one communication module according to the detection result of the power intensity; and

making an agreement on the determination result with at least one other communicating UWB system.

32. The method of claim 31, wherein the step of making an agreement on the set result includes:

storing information on the determination result; and  
transmitting the stored information to the other UWB receiver.